

### PFC-1 Cotton Fabric Phenolic Wear Rings

The function of a phenolic wear ring (or Guide ring) is to guide the piston and piston rod of the hydraulic cylinder, absorbing transverse forces. At the same time, the Wear Ring prevents metal-to-metal contact, optimizing the performance of the sealing system.

### PFC-1 Material Structure: Phenolic resin + cotton fiber

Kintowe PFC-1 composite material is high-strength laminated material based upon the thermosetting phenolic resin and reinforced with high-quality cotton fiber and finally finished with heat solidifying process under certain pressure and temperature.

### PFC-1 Material Advantages:

High load sustainability

Excellent abrasion resistance

Excellent temperature resistance




Good dimensional stability

Improves seal performance

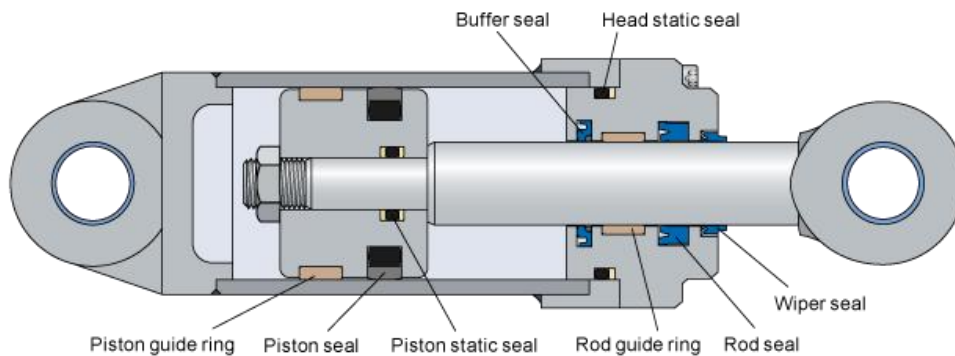
### PFC-1 Material Technical Parameters:

| Part Number                   | PFC-1   | Test Method |
|-------------------------------|---|-------------|
| Color                         | Light yellow to brown                                     | /           |
| Density                       | 1.2-1.4g/cm <sup>3</sup><br>0.043-0.051lb/in <sup>3</sup> | DIN 53476   |
| Tensile Strength              | 45MPa<br>6525PSI  | ISO 527     |
| Ultimate Compressive Strength | 256MPa<br>37120PSI  | ISO 604     |
| Impact Strength               | 26 J/m  | /           |
| Rockwell Hardness             | 95HRM   | ASTM D-229  |
| Coefficient of friction       | 0.23-0.46(Dry)<br>0.12-0.14(Oil)                          | ASTM D 1894 |
| Temperature                   | -40° to 130° C<br>-40° to 266° F                          |             |

Wear Cut Styles:

| Style   | Advantages   |
|---|--|
|  <p>Angle Cut</p>  | <p>Angle cut rings improve bearing stress at the gap. These rings tend to suit reciprocating movement.</p>   |
|  <p>Butt Cut</p>   | <p>Straight Cut, also known as Butt Cut rings are the easiest style to install in many applications. Straight cut rings are best suited for rotary movement.</p>                               |
|  <p>Step Cut</p> | <p>Step cut rings also improve bearing stress at the gap. However, they offer better resistance to contaminants and spike loads. This type of design offers the best level of performance.</p> |

Typical application: Hydraulic support, wear rings and guide rings of hydraulic cylinders.



Standard Size Sheet, additional sizes are available upon request.

| Part Number | I.D.(mm) | O.D.(mm) | Width (mm) |
|-------------|----------|----------|------------|
| PFC-1       | 20       | 25       | 5.6        |
| PFC-1       | 20       | 25       | 6.3        |
| PFC-1       | 20       | 25       | 9.7        |
| PFC-1       | 25       | 30       | 5.6        |
| PFC-1       | 25       | 30       | 9.7        |
| PFC-1       | 27       | 32       | 5.6        |
| PFC-1       | 27       | 32       | 6.3        |
| PFC-1       | 27       | 32       | 9.7        |
| PFC-1       | 28       | 32       | 6          |
| PFC-1       | 28       | 32       | 8          |
| PFC-1       | 28       | 32       | 9.5        |
| PFC-1       | 30       | 33       | 5.6        |
| PFC-1       | 30       | 34       | 8          |
| PFC-1       | 30       | 34       | 9.7        |
| PFC-1       | 30       | 35       | 5.6        |
| PFC-1       | 30       | 35       | 9.7        |
| PFC-1       | 35       | 38       | 6          |
| PFC-1       | 35       | 38       | 9.7        |
| PFC-1       | 35       | 39       | 8          |
| PFC-1       | 35       | 39       | 5.6        |
| PFC-1       | 35       | 39       | 9.6        |
| PFC-1       | 36       | 39       | 5.6        |
| PFC-1       | 36       | 41       | 5.6        |
| PFC-1       | 36       | 41       | 9.7        |
| PFC-1       | 38       | 43       | 5.6        |
| PFC-1       | 38       | 43       | 9.7        |
| PFC-1       | 38       | 43       | 20         |
| PFC-1       | 40       | 44       | 9.2        |
| PFC-1       | 40       | 45       | 5.6        |
| PFC-1       | 40       | 45       | 9.7        |
| PFC-1       | 40       | 46       | 9.6        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 41       | 45       | 9.6       |
| PFC-1       | 41       | 45       | 20        |
| PFC-1       | 44       | 50       | 9.7       |
| PFC-1       | 45       | 50       | 5.6       |
| PFC-1       | 45       | 50       | 9.7       |
| PFC-1       | 45       | 50       | 10        |
| PFC-1       | 45       | 50       | 15        |
| PFC-1       | 45       | 51       | 22.5      |
| PFC-1       | 46       | 51       | 9.7       |
| PFC-1       | 46       | 51       | 15        |
| PFC-1       | 50       | 55       | 5.6       |
| PFC-1       | 50       | 55       | 9.7       |
| PFC-1       | 50       | 55       | 15        |
| PFC-1       | 50       | 55       | 20        |
| PFC-1       | 50       | 56       | 12.7      |
| PFC-1       | 51       | 56       | 5.6       |
| PFC-1       | 51       | 56       | 9.7       |
| PFC-1       | 54       | 60       | 9.7       |
| PFC-1       | 54       | 60       | 12.5      |
| PFC-1       | 54       | 60       | 24.6      |
| PFC-1       | 55       | 60       | 5.6       |
| PFC-1       | 55       | 60       | 9.7       |
| PFC-1       | 55       | 60       | 15        |
| PFC-1       | 56       | 60       | 8         |
| PFC-1       | 56       | 60       | 10        |
| PFC-1       | 56       | 61       | 9.7       |
| PFC-1       | 56       | 61       | 15        |
| PFC-1       | 56       | 62       | 25        |
| PFC-1       | 57       | 63       | 12.5      |
| PFC-1       | 58       | 63       | 9.7       |
| PFC-1       | 58       | 63       | 15        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 60       | 65       | 5.6       |
| PFC-1       | 60       | 65       | 9.7       |
| PFC-1       | 60       | 65       | 19.3      |
| PFC-1       | 63       | 68       | 9.7       |
| PFC-1       | 63       | 68       | 15        |
| PFC-1       | 63       | 68       | 25        |
| PFC-1       | 63       | 69       | 31.5      |
| PFC-1       | 64       | 70       | 10        |
| PFC-1       | 64       | 70       | 12.7      |
| PFC-1       | 65       | 70       | 6.3       |
| PFC-1       | 65       | 70       | 9.7       |
| PFC-1       | 65       | 70       | 15        |
| PFC-1       | 65       | 70       | 20        |
| PFC-1       | 70       | 75       | 5.6       |
| PFC-1       | 70       | 75       | 9.7       |
| PFC-1       | 70       | 75       | 15        |
| PFC-1       | 70       | 75       | 25        |
| PFC-1       | 70       | 76       | 19.5      |
| PFC-1       | 74       | 80       | 12.7      |
| PFC-1       | 74       | 80       | 20        |
| PFC-1       | 75       | 80       | 5.6       |
| PFC-1       | 75       | 80       | 9.7       |
| PFC-1       | 75       | 80       | 15        |
| PFC-1       | 75       | 80       | 20        |
| PFC-1       | 80       | 85       | 9.7       |
| PFC-1       | 80       | 85       | 15        |
| PFC-1       | 80       | 85       | 20        |
| PFC-1       | 80       | 85       | 25        |
| PFC-1       | 80       | 86       | 12.5      |
| PFC-1       | 80       | 86       | 35        |
| PFC-1       | 80       | 86       | 40        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 82       | 90       | 6         |
| PFC-1       | 82       | 90       | 15        |
| PFC-1       | 84       | 90       | 15        |
| PFC-1       | 84       | 90       | 25        |
| PFC-1       | 85       | 90       | 5         |
| PFC-1       | 85       | 90       | 9.7       |
| PFC-1       | 85       | 90       | 15        |
| PFC-1       | 85       | 91       | 12.5      |
| PFC-1       | 85       | 91       | 15        |
| PFC-1       | 85       | 91       | 20        |
| PFC-1       | 90       | 95       | 6         |
| PFC-1       | 90       | 95       | 9.7       |
| PFC-1       | 90       | 95       | 15        |
| PFC-1       | 90       | 95       | 25        |
| PFC-1       | 91       | 100      | 12.5      |
| PFC-1       | 91       | 100      | 14.3      |
| PFC-1       | 94       | 100      | 12.7      |
| PFC-1       | 94       | 100      | 15        |
| PFC-1       | 95       | 100      | 5.6       |
| PFC-1       | 95       | 100      | 9.7       |
| PFC-1       | 95       | 100      | 15        |
| PFC-1       | 100      | 105      | 9.7       |
| PFC-1       | 100      | 105      | 15        |
| PFC-1       | 102      | 110      | 15        |
| PFC-1       | 104      | 110      | 12.5      |
| PFC-1       | 104      | 110      | 25        |
| PFC-1       | 105      | 110      | 7.9       |
| PFC-1       | 105      | 110      | 9.7       |
| PFC-1       | 105      | 110      | 15        |
| PFC-1       | 115      | 110      | 9.7       |
| PFC-1       | 115      | 110      | 15        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 115      | 110      | 25        |
| PFC-1       | 114      | 120      | 15        |
| PFC-1       | 114      | 120      | 20        |
| PFC-1       | 114      | 120      | 30        |
| PFC-1       | 115      | 120      | 5.6       |
| PFC-1       | 115      | 120      | 7.9       |
| PFC-1       | 115      | 120      | 9.7       |
| PFC-1       | 115      | 120      | 14.8      |
| PFC-1       | 115      | 120      | 15        |
| PFC-1       | 115      | 120      | 20        |
| PFC-1       | 115      | 120      | 25        |
| PFC-1       | 119      | 125      | 15        |
| PFC-1       | 119      | 125      | 20        |
| PFC-1       | 120      | 125      | 7.9       |
| PFC-1       | 120      | 125      | 9.7       |
| PFC-1       | 120      | 125      | 14.8      |
| PFC-1       | 120      | 125      | 15        |
| PFC-1       | 120      | 125      | 20        |
| PFC-1       | 120      | 125      | 25        |
| PFC-1       | 121      | 125      | 19.8      |
| PFC-1       | 123      | 130      | 30        |
| PFC-1       | 124      | 130      | 6         |
| PFC-1       | 124      | 130      | 15        |
| PFC-1       | 125      | 130      | 7.9       |
| PFC-1       | 125      | 130      | 9.7       |
| PFC-1       | 125      | 130      | 15        |
| PFC-1       | 125      | 130      | 20        |
| PFC-1       | 125      | 130      | 25        |
| PFC-1       | 125      | 131      | 30        |
| PFC-1       | 128      | 135      | 15        |
| PFC-1       | 128      | 135      | 25        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 130      | 135      | 7.9       |
| PFC-1       | 130      | 135      | 9.7       |
| PFC-1       | 130      | 135      | 15        |
| PFC-1       | 130      | 135      | 20        |
| PFC-1       | 133      | 140      | 9.7       |
| PFC-1       | 133      | 140      | 14.8      |
| PFC-1       | 133      | 140      | 35        |
| PFC-1       | 134      | 140      | 12.5      |
| PFC-1       | 134      | 140      | 25        |
| PFC-1       | 135      | 140      | 7.9       |
| PFC-1       | 135      | 140      | 9.5       |
| PFC-1       | 135      | 140      | 15        |
| PFC-1       | 138      | 145      | 14.8      |
| PFC-1       | 140      | 145      | 7.9       |
| PFC-1       | 140      | 145      | 9.7       |
| PFC-1       | 140      | 145      | 15        |
| PFC-1       | 140      | 145      | 20        |
| PFC-1       | 140      | 148      | 40        |
| PFC-1       | 145      | 150      | 9.7       |
| PFC-1       | 145      | 150      | 15        |
| PFC-1       | 145      | 150      | 20        |
| PFC-1       | 145      | 150      | 25        |
| PFC-1       | 150      | 155      | 7.9       |
| PFC-1       | 150      | 155      | 15        |
| PFC-1       | 150      | 155      | 20        |
| PFC-1       | 150      | 155      | 25        |
| PFC-1       | 153      | 160      | 20        |
| PFC-1       | 153      | 160      | 40        |
| PFC-1       | 154      | 160      | 19.5      |
| PFC-1       | 155      | 160      | 7.9       |
| PFC-1       | 155      | 160      | 9.7       |



| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 155      | 160      | 15        |
| PFC-1       | 155      | 160      | 20        |
| PFC-1       | 155      | 160      | 25        |
| PFC-1       | 160      | 165      | 9.7       |
| PFC-1       | 160      | 165      | 15        |
| PFC-1       | 160      | 165      | 20        |
| PFC-1       | 160      | 165      | 25        |
| PFC-1       | 165      | 170      | 9.5       |
| PFC-1       | 165      | 170      | 15        |
| PFC-1       | 170      | 175      | 9.7       |
| PFC-1       | 170      | 175      | 15        |
| PFC-1       | 174      | 180      | 19.2      |
| PFC-1       | 175      | 180      | 9.7       |
| PFC-1       | 175      | 180      | 15        |
| PFC-1       | 175      | 180      | 20        |
| PFC-1       | 175      | 180      | 25        |
| PFC-1       | 180      | 185      | 9.7       |
| PFC-1       | 180      | 185      | 15        |
| PFC-1       | 180      | 185      | 20        |
| PFC-1       | 180      | 185      | 25        |
| PFC-1       | 185      | 190      | 14.8      |
| PFC-1       | 185      | 190      | 15        |
| PFC-1       | 190      | 195      | 15        |
| PFC-1       | 192      | 200      | 22.5      |
| PFC-1       | 194      | 200      | 12        |
| PFC-1       | 194      | 200      | 19.2      |
| PFC-1       | 194      | 200      | 20        |
| PFC-1       | 194      | 200      | 35        |
| PFC-1       | 194      | 200      | 50        |
| PFC-1       | 195      | 200      | 9.7       |
| PFC-1       | 195      | 200      | 15        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 195      | 200      | 20        |
| PFC-1       | 195      | 200      | 25        |
| PFC-1       | 200      | 205      | 15        |
| PFC-1       | 200      | 205      | 20        |
| PFC-1       | 200      | 205      | 25        |
| PFC-1       | 204      | 209      | 10        |
| PFC-1       | 204      | 209      | 15        |
| PFC-1       | 205      | 210      | 15        |
| PFC-1       | 205      | 210      | 25        |
| PFC-1       | 210      | 215      | 9.7       |
| PFC-1       | 210      | 215      | 15        |
| PFC-1       | 225      | 230      | 15        |
| PFC-1       | 225      | 230      | 20        |
| PFC-1       | 240      | 245      | 15        |
| PFC-1       | 240      | 245      | 20        |
| PFC-1       | 240      | 245      | 25        |
| PFC-1       | 242      | 250      | 25        |
| PFC-1       | 245      | 250      | 15        |
| PFC-1       | 245      | 250      | 20        |
| PFC-1       | 245      | 250      | 25        |
| PFC-1       | 270      | 275      | 15        |
| PFC-1       | 280      | 285      | 15        |
| PFC-1       | 280      | 285      | 20        |
| PFC-1       | 292      | 300      | 40        |
| PFC-1       | 292      | 300      | 60        |
| PFC-1       | 295      | 300      | 20        |
| PFC-1       | 295      | 300      | 25        |
| PFC-1       | 300      | 305      | 15        |
| PFC-1       | 300      | 305      | 20        |
| PFC-1       | 300      | 305      | 25        |
| PFC-1       | 314      | 320      | 15        |

| Part Number | I.D.(mm) | O.D.(mm) | Width(mm) |
|-------------|----------|----------|-----------|
| PFC-1       | 314      | 320      | 20        |
| PFC-1       | 315      | 320      | 15        |
| PFC-1       | 315      | 320      | 20        |
| PFC-1       | 315      | 320      | 25        |
| PFC-1       | 320      | 325      | 15        |
| PFC-1       | 320      | 325      | 25        |
| PFC-1       | 340      | 345      | 15        |
| PFC-1       | 340      | 345      | 25        |
| PFC-1       | 360      | 365      | 20        |
| PFC-1       | 360      | 365      | 25        |
| PFC-1       | 372      | 380      | 20        |
| PFC-1       | 372      | 380      | 25        |
| PFC-1       | 375      | 380      | 15        |
| PFC-1       | 385      | 390      | 15        |
| PFC-1       | 395      | 400      | 15        |
| PFC-1       | 395      | 400      | 25        |
| PFC-1       | 400      | 405      | 25        |
| PFC-1       | 415      | 420      | 25        |
| PFC-1       | 495      | 500      | 25        |